Appendix F – Wetland Reconnaissance Letter

ADOLFSON

Environmental Solutions

February 10, 2004

R. W. Beck, Inc.
Attn: Mr. Karl Hufnagel, P.E.
1001 Fourth Avenue, Suite 2500
Seattle, WA 98154-1004

RE: Wetland Reconnaissance for Bow Lake Transfer Station and WSDOT Property, Tukwila, WA

Dear Mr. Hufnagel,

Adolfson Associates, Inc. (Adolfson) is pleased to present the findings from our wetland reconnaissance for the Bow Lake Transfer Station and adjacent WSDOT property in Tukwila, Washington (Figure 1). Improvements to the Bow Lake Transfer Station are currently being considered and include the addition of a new scale facility, an enlarged transfer trailer parking yard, improved recycling facilities including a yard waste receiving area, an expanded employee building, new public facilities building and possibly a new public access road. The property is located on the east side of northbound I-5 at the Orillia Road/South 188th Street interchange area.

The approximately 8 acre WSDOT property, which is part of a proposed acquisition for expansion, is immediately north of the existing Bow Lake Transfer Station. Undeveloped wooded areas occur to the north of the WSDOT property and south of the transfer station. The eastern portion of the property, beyond the transfer station, is a mixture of disturbed and forested area to the toe of the slope that leads to the Kent Valley, which is a commercial and industrial area.

This letter describes the methodologies used to evaluate the presence of wetlands and vegetation types based on information collected during the field reconnaissance visit. This letter does not include an analysis of impacts to wetlands or buffers or mitigation planning. Wetland boundaries were not flagged and formal wetland delineations have not been conducted by Adolfson at this time.

Methods

Wetland determinations were made using methods defined in the *Washington State Wetlands Identification and Delineation Manual* (Washington State Department of Ecology, 1997), a manual consistent with the *Corps of Engineers Wetlands Delineation Manual* ("1987 Manual") (Environmental Laboratory, 1987). The methods outlined in the manual are based upon three essential characteristics of wetlands: (1) hydrophytic vegetation; (2) hydric soils; and (3) wetland hydrology. Field indicators of these three

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characteristics must all be present in order to make a positive wetland determination.

Existing Information

A review of existing information was conducted prior to field work. The *United States Fish and Wildlife Service (USFWS) National Wetland Inventory* (Des Moines quadrangle) and *King County Sensitive Area Map Folio* (King County, 1990) identified no wetlands in the vicinity of the Bow Lake Transfer Station. The *Bow Lake Transfer/Recycling Station Facility Master Plan* (King County Department of Natural Resources (Solid Waste Division), 1998) identifies two potential palustrine forested (PFO1) wetland areas within the area observed during the site visit. These wetland areas were never formally delineated but were noted during a site reconnaissance based on the 1989 Corps Manual. The *Engineering Services for Bow Lake Transfer Station/Recycling Facility Master Plan Update and Implementation Proposal* (R.W. Beck, 2002) prepared for King County was also utilized for background information.

Site Visit

Teresa Vanderburg and I met on-site with you and Beverley Charlish on January 15, 2004 prior to conducting our field investigation. Teresa and I walked the entire transfer station site and investigated possible wetland areas within the undeveloped portion of the WSDOT property proposed for a future development.

The vegetation communities within the proposed improvement areas include primarily disturbed areas. The areas immediately surrounding the transfer station are considered disturbed areas with few trees and little ground cover. The WSDOT property is a disturbed area comprised of Himalayan blackberry (*Rubus procerus*), Scot's broom (*Cytisus scoparius*), and grasses/weeds.

Findings

No wetland areas were identified during the January 2004 site visit. The potential wetland previously identified during the 1998 reconnaissance no longer meets wetland criteria due to removal of the culvert outfall. One wetland plot (Plot 1) was taken in the previously existing wetland and another (Plot 2) was taken approximately 200 feet down-slope of Plot 1(Figure 2). Photos one and two document conditions in this area.

Soil in Plot 1 was comprised of a sandy loam fill material (2.5 Y 4/2) with mottles and was saturated due to compaction. This area was obviously disturbed and contained non-native fill material. The water table was reached at a depth of 15 inches. Vegetation consisted of reed canarygrass (*Phalaris arundinacea)*, Himalayan blackberry (*Rubus procerus*), cleavers bedstraw (*Galium aparine*), and agrostis (*Agrostis alba*), black cottonwood (*Populus balsamifera*), big-leaf maple (*Acer macrophyllum*), and red alder (*Alnus rubra)*. This plot contained hydric soils and hydrology (in the winter), but lacked the necessary wetland vegetation to be considered a wetland. It should also be noted that

it was raining during the site visit, which may have influenced hydrology at the time of the site visit.

Soil in Plot 2 consisted of native sandy loam (10-YR 3/2) from the surface to 10 inches in depth. Silty loam (2.5-Y 4/3) occurred from 10 inches to 16 inches in depth. Soils were not saturated and the water table was never reached. Vegetation consisted of Himalayan blackberry (*Rubus procerus*), reed canarygrass (*Phalaris arundinacea*), big-leaf maple (*Acer macrophyllum*) saplings, and red alder (*Alnus rubra*). This area was also determined to be non-wetland. Soils were not hydric, wetland hydrology did not exist, and wetland vegetation was not dominant.

Adolfson also surveyed the WSDOT site north of the transfer station facility. The WSDOT site was surveyed to the forested perimeter on the north side, to the eastern edge of the lower bench (eastern edge of blackberry thicket), to the Bow Lake Transfer Station to the south, and to I-5 to the west. The site is comprised of two parts or benches. The WSDOT site is higher in elevation than the Bow Lake Transfer Station Site. The upper-bench was created by the historical disposal of construction spoil material, and the lower bench was created by the disposal of burned refuse material (Hufnagel, personal communications, 2004). The upper bench is highly compacted resulting in water collection at the surface (Photo 3). The soils were not considered hydric (compacted fill material), there is no evidence of hydrology, and vegetation on the disturbed upper bench consists mainly of grasses and weeds while the lower bench is primarily Scot's broom (*Cytisus scoparius*), Himalayan blackberry (*Rubus procerus*), and young red alder (*Alnus rubra).*

In addition, it was also noted that a stream appears to cross the northern portion of the WSDOT property (King County GIS; Figure 1). The stream exists within a steep slope forested ravine north of the disturbed area and is currently receiving stormwater runoff from I-5 (Photo 4). It appears that the discharge area has created landslides in the past, and has created dangerous undercut banks at the top edge of the slope. Wetlands may be associated with the bottom of this ravine near the stream; however, this area was not surveyed. It appears that both the stream and associated steep slope buffer are located on the WSDOT property.

Regulations

Sensitive areas within the proposed improvements to the Bow Lake Transfer Station are regulated by Tukwila Municipal Code (TMC) Title 18 - Zoning. According to TMC 18.45.020, the ravine area containing a stream, steep slopes, and landslide evidence is likely considered an Area of Potential Geologic Instability with a ranking of Class 3 or 4. According to TMC 18.45.040 (Sensitive Area Buffers), a geotechnical report may be required to identify appropriate buffer widths in relation to activities proposed pursuant to the requirements of TMC 18.45.060 and 18.45.080E.4. Standard stream buffers in the code range from a 15-foot-wide buffer for a Type III stream to a 70-foot-wide buffer for a Type I stream.

Limitations

Adolfson conducted a wetland and stream reconnaissance on the disturbed portions of the WSDOT property and to the fence line south and east of the existing Bow Lake Transfer Station property. Adolfson did not formally delineate wetlands or streams. Adolfson observed a stream, steep slopes and probable wetlands associated with the stream in the forested portion of the WSDOT property north of the disturbed areas and beyond our scoped reconnaissance area. It is recommended that these areas receive further review prior to development of this area. It should be recognized that wetland identification is an inexact science and that differences in professional opinion often occur between trained individuals. Further, wetlands are by definition transition areas and the definition of jurisdictional wetlands is subject to change.

Within the limitations of schedule, budget, and scope-of-work, we warrant that this study was conducted in accordance with generally accepted environmental science practices, including the technical guidelines and criteria in effect at the time that this study was performed. The results and conclusions expressed herein represent our best professional judgment, based upon information provided by the project proponent, in addition to that obtained during the course of this survey. No other warranty, expressed or implied, is made.

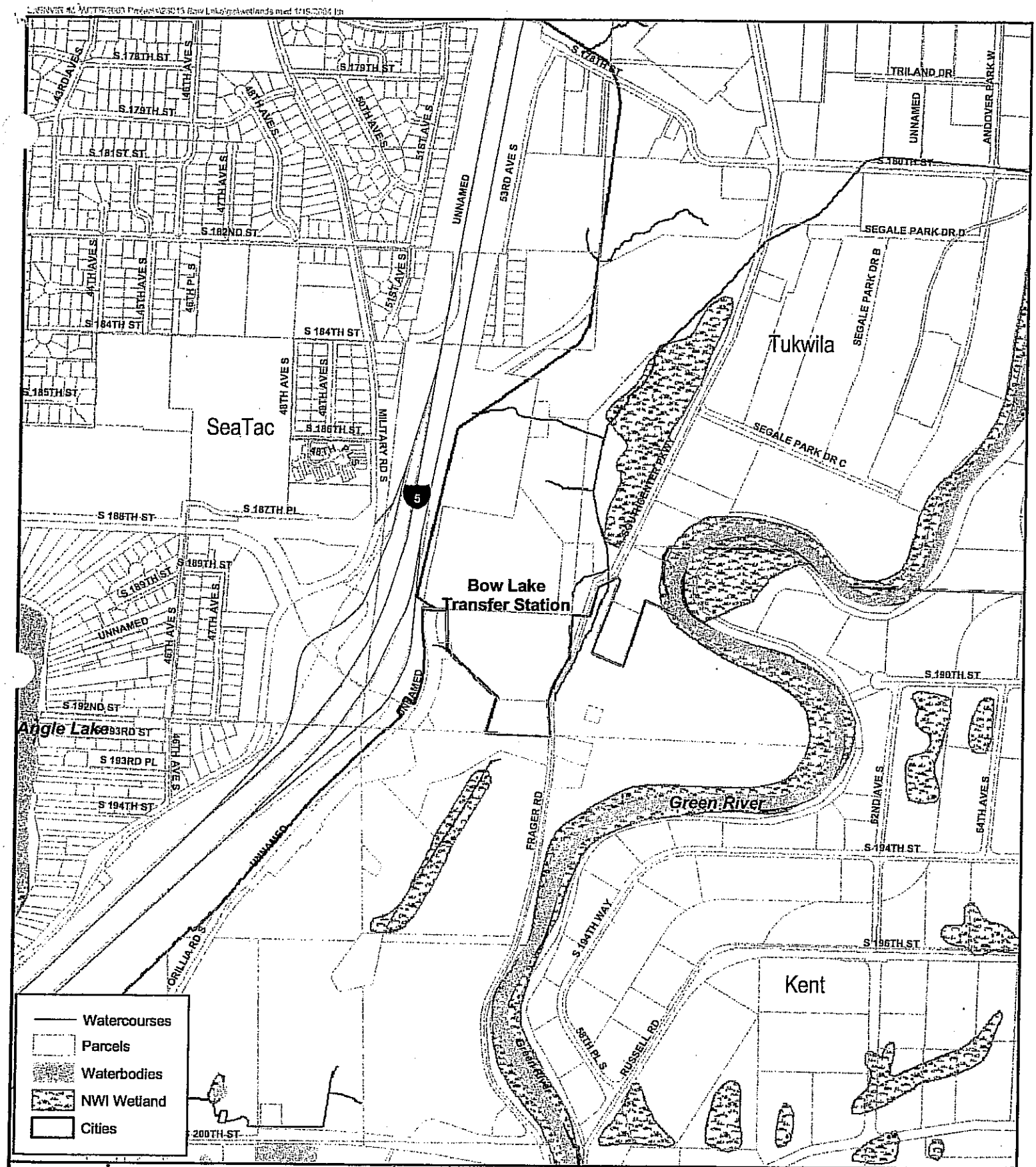
Please contact me at 206-789-9658, if you have any questions or comments

Sincerely,

ADOLFSON ASSOCIATES, INC.

Steven Krueger
Staff Scientist

Attachments: Figures and Photos



Map data shown are the property of the sources listed below. Inaccuracies may exist, and Adolfson Associates, Inc. implies no warranties or guarantees regarding any aspect of data depiction.

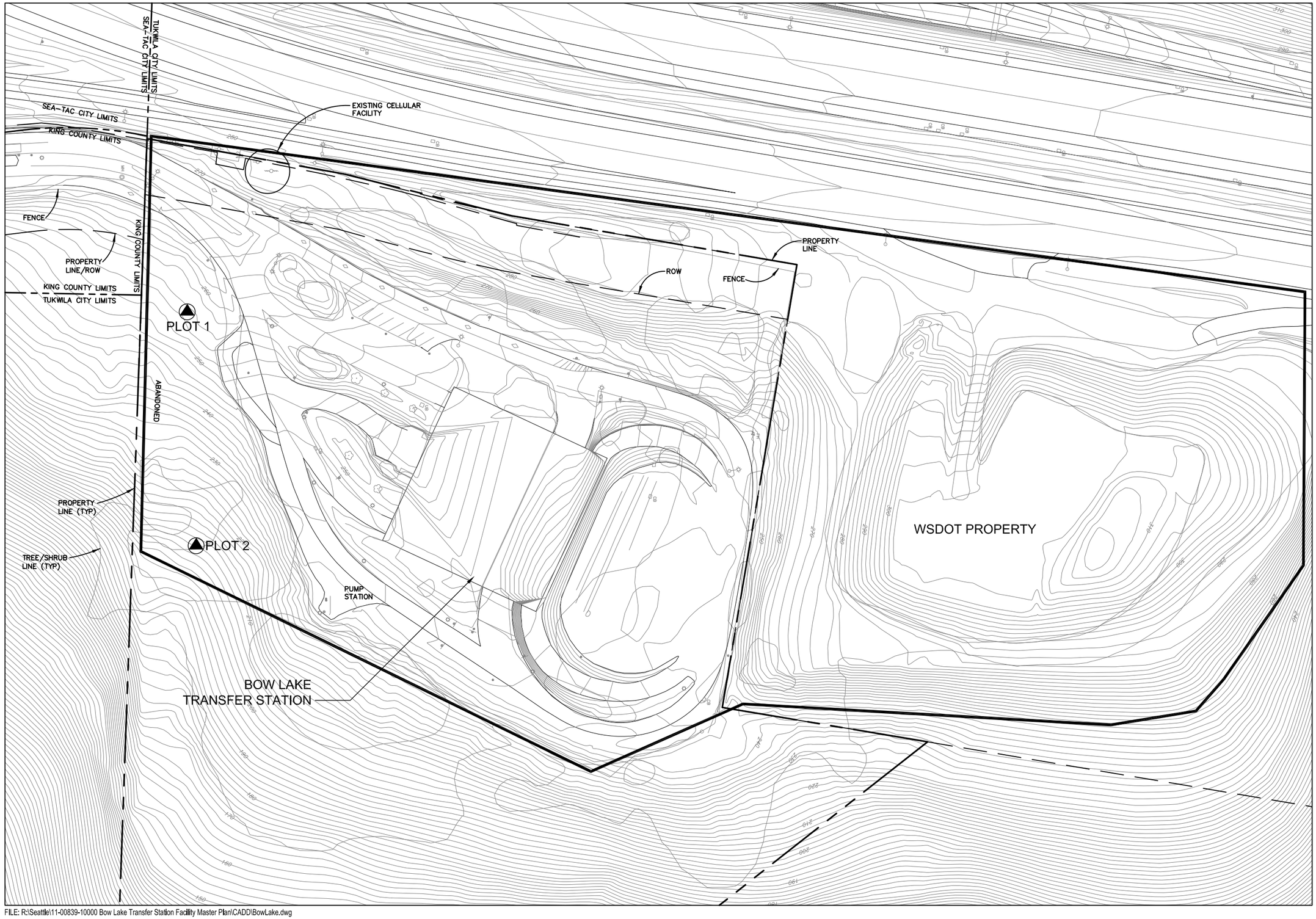
Source: King County GIS, 2003; USFWS, National Wetlands Inventory

FIGURE 1

NATIONAL WETLANDS INVENTORY

BOW LAKE TRANSFER STATION

TUKWILA, WASHINGTON



FILE: R:\Seattle\11-00839-10000 Bow Lake Transfer Station Facility Master Plan\CADD\BowLake.dwg

LEGEND

SD	STORM DRAIN
S	SANITARY SEWER
W	WATER
CB	CATCH BASIN
UP	UNDERGROUND POWER
UT	UNDERGROUND TELEPHONE

PROPERTY LINE

CITY LIMITS

ROW

SOIL TEST PIT LOCATION

RECONNAISSANCE LIMITS

50 0 50 100

1" = 50'

Figure 2
Bow Lake Transfer/
Recycling Station
Facility Master Plan
King County Solid Waste Division

R·W BECK

KPG
Architecture
Landscape Architecture
Civil Engineering

PHOTO 1. Bow Lake Transfer Station, Vegetation in proximity to Plot 1 and Plot 2 (1/15/04).

PHOTO 2. Vegetation facing uphill (NW) toward transfer station (1/15/04).

PHOTO 3. Upper bench of WSDOT property looking SE toward Kent (1/15/04).

PHOTO 4. Ravine w/stream and steep slopes just north of WSDOT property (1/15/04).